## **CLAIMS**

## I Claim:

- 1. A method for purifying fluid within a reflection optical switch system
   2 comprising:
- placing gettering structures within a chamber within the reflection optical
  switch system, the gettering structures including heating components which
  when actuated attract impurities; and,
- turning on the heating components within the gettering structures to getter out impurities from fluid within the chamber.
- 2. A method as in claim 1 wherein placing gettering structures includes placing heating components around filament holes through which vapor enters the chamber from a reservoir.
- 3. A method as in claim 1 wherein placing gettering structures includes placing heating components on pillars within filament holes through which vapor enters the chamber from a reservoir.
- 4. A method as in claim 1 wherein placing gettering structures includes placing structures that are optically accessible from outside the chamber.
- 5. A method as in claim 1 wherein placing gettering structures includes
  placing a plurality of coupon structures that are optically accessible from outside

- 3 the chamber, the plurality of coupon structures including coupon structures of
- 4 different sizes and composed of different materials so as to target different
- 5 materials for gettering.
- 6. A method as in claim 1 wherein placing gettering structures includes
- 2 placing structures that are used to generate a voltage differential across a gap of
- 3 predetermined size.
- 7. A reflection optical switch system comprising:
- 2 a chamber that stores fluid; and,
- 3 gettering structures within the chamber, the gettering structures
- 4 including heating components which when actuated getter impurities from the
- 5 fluid stored in the chamber.
- 8. A reflection optical switch system as in claim 7 wherein the gettering
- 2 structures include heating components placed around filament holes through
- 3 which vapor enters the chamber from a reservoir.
- 9. A reflection optical switch system as in claim 7 wherein the gettering
- 2 structures include heating components placed on pillars within filament holes
- 3 through which vapor enters the chamber from a reservoir.

- 1 10. A reflection optical switch system as in claim 7 wherein the gettering structures include structures that are optically accessible from outside the chamber.
- 1 11. A reflection optical switch system as in claim 7 wherein the gettering 2 structures include a plurality of coupon structures that are optically accessible 3 from outside the chamber, the plurality of coupon structures including coupon 4 structures of different sizes and composed of different materials so as to target 5 different materials for gettering.
- 1 12. A reflection optical switch system as in claim 7 wherein the gettering 2 structures include structures that are used to generate a voltage differential 3 across a gap of predetermined size.
- 1 13. A reflection optical switch system as in claim 7 wherein the gettering structures include bridge structures.
- 1 14. A reflection optical switch system comprising:
- 2 chamber means for storing fluid; and,
- gettering means, located within the chamber, for heating and gettering
- 4 the fluid stored in the chamber means.

- 1 15. A reflection optical switch system as in claim 14 wherein the gettering
  2 means includes heating components placed around filament holes through
  3 which vapor enters the chamber from a reservoir.
- 1 16. A reflection optical switch system as in claim 14 wherein the gettering
  2 means includes heating components placed on pillars within filament holes
  3 through which vapor enters the chamber from a reservoir.
- 1 17. A reflection optical switch system as in claim 14 wherein the gettering 2 means includes gettering structures that are optically accessible from outside the 3 chamber.
- 1 18. A reflection optical switch system as in claim 14 wherein the gettering
  2 means includes a plurality of coupon structures that are optically accessible from
  3 outside the chamber, the plurality of coupon structures including coupon
  4 structures of different sizes and composed of different materials so as to target
  5 different materials for gettering.
- 1 19. A reflection optical switch system as in claim 14 wherein the gettering 2 means include bridge structures.

- 20. A reflection optical switch system as in claim 14 wherein the gettering
- 2 means includes structures that are used to generate a voltage differential across a
- 3 gap of predetermined size.